



TECHNICAL DATA SHEET

RavaSafe® ZH-LSF 2

Product description:

Ravasafe ZH-LSF 2 is a thermoplastic zero halogen, low smoke flame retardant compound designed for general purpose insulation and sheathing application. Ravasafe ZH-LSF 2 combines excellent flame retardancy, good processing and good mechanical properties.

Typical Application: Telecom, LV power cable application

Standard norms (type of material)* : EN 50636 (TI7, TM7), VDE 0207 / 0250 (HM4, HI2) , BS 7655 (LTS 2) , IEC 60502 (ST8), IEC 60092-360 (SHF1)

Technical properties:

Physical properties	Typical Value	Units (SI)	Test Method
Density, 23°C	1,53	g/cm³	ISO 1183-1 (ASTM D792)
Melt flow index (150°C /21,6kg)	7,9	g/10 min	ISO 1133 (b)
Hardness (15 seconds)	49	Shore D	ISO R 868 (ASTM D2240)
Pressure test at high temperature (6h @ 90°C)	8	%	IEC 60811-508
Water immersion test (24h @ 70°C)	1,4	mg/cm²	IEC 60811-402
Mechanical properties	Typical Value	Units (SI)	Test Method
Tear strength 23°C	6,5	N/mm	BS 6469-99.1
Unaged mechanical properties (200 mm/min)			
Tensile strength	10,6	MPa	IEC 60811-501
Elongation at break	176	%	
Thermal ageing 7 days at 100°C			
Tensile strength variation (Δ)	0	%	IEC 60811-501
Elongation at break variation (Δ)	-17	%	
Thermal ageing 7 days at 110°C			
Tensile strength variation (Δ)	3	%	IEC 60811-501
Elongation at break variation (Δ)	-18	%	
Thermal ageing 7 days at 120°C			
Tensile strength variation (Δ)	7	%	IEC 60811-501
Elongation at break variation (Δ)	-18	%	
Flammability	Typical Value	Units (SI)	Test Method
Oxygen Index	39	%	ISO 4589-2 (ASTM D2863)
Temperature Index	316	°C	ISO 4589-3
Halogen content	< 0,5	%	IEC 60754-1
Acid gas emission			
pH	> 4,3	/	IEC 60754-2
Conductivity	< 2,5	µS/mm	
Smoke density measurement			

Smoke density – Flaming mode (1,5 mm) Ds max	34	/	ASTM E 662
Smoke density – Non Flaming mode (1,5 mm) Ds max	286	/	
Electrical properties	Typical Value	Units (SI)	Test Method
Volume Resistivity	7,8x10 ¹⁴	Ω.cm	ASTM D 257
Surface Resistivity	2,4x10 ¹⁶	Ω	ASTM D 257

Recommended extrusion profile:

Extrusion	Cylinder Temperatures							
	Z1	Z2	Z3	Z4	Z5	Collar	Head	Die
Temperature (Imperial)	248°F	266°F	284°F	302°F	302°F	311°F	320°F	329°F
Temperature (SI)	120°C	130°C	140°C	150°C	150°C	155°C	160°C	165°C

Ravasafe ZH-LSF 2 is a product able to run on standard extruders, based on low compression screw and head. This compound is supplied in aluminum foil bags. Pre-drying is not required before extrusion process. Ravasafe ZH-LSF 2 is colorable. A full range of specific color masterbatches (RAVACOLOR™) and additive masterbatches (RAVABOOST™) are available.

*All the values are measured on extruded tape.

For any further information, please contact Ravago W&C.

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